

# Men Who Have Sex with Men

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## Introduction

The HIV/AIDS epidemic was first recognized among men who have sex with men (MSM). Although the overall number of cases attributed to male-to-male sex each year has decreased over time, it is the predominant reported mode of exposure in Massachusetts among people recently diagnosed with HIV infection. Male-to-male sex (including male-to-male sex/injection drug use) accounts for the largest proportion (39%) of HIV exposure among people diagnosed with HIV infection within the three-year period 2004 to 2006. Among all people living with HIV/AIDS on December 31, 2007, male-to-male sex (including male-to-male sex/injection drug use) accounts for 37% of reported HIV exposures.

## General Statistics:

- Within the three-year period 2004 to 2006, 989 of the people diagnosed with HIV infection were men who have sex with men, accounting for 39% of all reported cases and 53% of HIV infections among men in Massachusetts. Of the 989 HIV-infected MSM, 5% (N=49) also have reported injecting drugs.
- On December 31, 2007, there were 6,312 men living with HIV/AIDS in whom HIV infection was attributed to male-to-male sex, representing 37% of all people living with HIV/AIDS in Massachusetts and 52% of men living with HIV/AIDS. Of these 6,312 men, 9% (N=539) also reported injecting drugs.

## Regional Distribution:

Male-to-male sex is the most frequently reported mode of exposure in the Boston, Metrowest and Southeast Health Service Regions among people recently diagnosed with HIV infection. Among those living with HIV/AIDS, it is the most frequently reported mode of exposure in the Boston, Metrowest, Southeast and Northeast Health Service Regions.

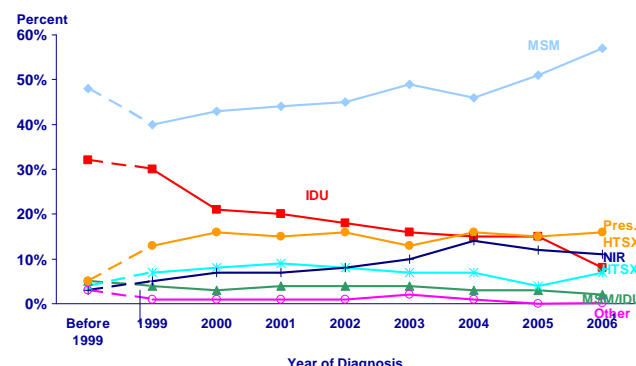
Among cities with over 20 people diagnosed with HIV infection within the three-year period 2004 to 2006, the following have the highest proportions of persons whose HIV infection is attributed to male-to-male sex (N=number of HIV-infected men reported to be MSM, not including those with a history of injection drug use):

• Provincetown	94%	(N=29)
• Cambridge	54%	(N=34)
• Medford	54%	(N=14)
• Boston	52%	(N=389)
• Somerville	46%	(N=25)
• Quincy	43%	(N=13)
• Everett	38%	(N=9)
• Revere	38%	(N=9)
• Haverhill	36%	(N=8)
• Lynn	29%	(N=14)

## Diagnosis of HIV Infection over Time

The proportion of men diagnosed with HIV infection who were reported to have engaged in male-to-male sex (not including those with a history of injection drug use) rose from 40% in 1999 to 57% in 2006.

Figure 1. Percentage Distribution of Males Diagnosed with HIV Infection by Exposure Mode and Year of Diagnosis: MA, Before 1999, 1999–2006<sup>1</sup>



Note: a dashed line is used to distinguish between pre-1999 data (which is an aggregate of multiple years) and annual data for subsequent years. <sup>1</sup> 2006 Data are preliminary; Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/08

## Race/Ethnicity:

- The distribution of race/ethnicity among MSM diagnosed with HIV infection within the three-year period 2004 to 2006 was:
  - 67% white (non-Hispanic)
  - 14% black (non-Hispanic)
  - 17% Hispanic
  - 2% other
- Of all men recently diagnosed with HIV infection attributed to male-to-male sex, the majority (67%) are white (non-Hispanic). Among men recently diagnosed with HIV infection and exposed through other modes, the largest proportions are black (non-Hispanic) (37%) and Hispanic (34%).
- The distribution of race/ethnicity among MSM living with HIV/AIDS is similar to that among MSM recently diagnosed with HIV infection: 72% percent are white (non-Hispanic), 12% are black (non-Hispanic), 13% are Hispanic and 2% are of other race/ethnicity.

## Age at HIV Diagnosis:

- Ten percent (N=97) of MSM diagnosed with HIV infection within the three-year period 2004 to 2006 were diagnosed during adolescence (13–24 years), as compared to 3% (N=30) of men reportedly exposed by other means.
- The proportion of adolescent MSM recently diagnosed with HIV infection varies by race/ethnicity, with 25% (N=35) of black (non-Hispanic) MSM and 9% (N=15) of Hispanic MSM with HIV infection diagnosed between the ages of 13 and 24 years, compared to 7% (N=44) of HIV-infected white (non-Hispanic) MSM.
- Twenty percent of MSM recently diagnosed with HIV infection were in their 20s, 37% in their 30s, 31% in their 40s and 10% at age 50 years or older.

## Place of Birth:

- The distribution of place of birth of MSM diagnosed with HIV infection within the three-year period 2004 to 2006 was:
  - 83% United States
  - 3% Puerto Rico or another US dependency
  - 14% Outside the US
- The distribution of place of birth among MSM living with HIV/AIDS is similar to that among MSM recently diagnosed with HIV infection: 86% percent were born in the US, 4% were born in Puerto Rico or another US dependency and 11% were born outside of the US.
- The distribution of place of birth varies by race/ethnicity among MSM diagnosed with HIV infection. Thirty-eight percent of Hispanic MSM diagnosed with HIV infection within the three-year period 2004 to 2006 were born outside the US, compared to 14% of black (non-Hispanic) MSM and 7% of white (non-Hispanic) MSM.

## Risk of HIV Infection:

**Behavioral Risk:** According to behavioral surveys, MSM in Massachusetts are engaging in behaviors that put them at risk for HIV infection.

- From 2000 to 2006, the proportion of male respondents to the Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) reporting sex with males in the past 12 months ranged from 4.3% to 9.4%.
- The proportion of BRFSS respondents reporting male-to-male sex who used a condom at last sexual encounter increased from 34% in 2000 to 46% in 2002, decreased to 39% in 2003, and then increased to 56% in 2005 and 2006 (see note below).
- Forty-three percent of respondents to the 2005 and 2006 BRFSS who reported male-to-male sex reported two or more sex partners, compared to 13% of male respondents with exclusively female sex partners.

- Fifty percent of respondents to the 2005 and 2006 BRFSS who reported male-to-male sex reported condom use at last sexual encounter, compared to 23% of male respondents with exclusively female sex partners.
- From 1993 to 2005, the proportion of male respondents to the Massachusetts Youth Risk Behavior Survey (YRBS) reporting male to male sex at any point in their lifetime ranged from 2.5% to 4.9%.
- Among high school-aged respondents to the 2005 YRBS reporting male-to-male sex:
  - 57% used a condom at last intercourse, compared to 73% of sexually active males with only female partners;
  - 35% reported alcohol/drug use at last intercourse, compared to 26% of other sexually active males;
  - 38% reported having four or more lifetime sexual partners, compared to 24% of other males;
  - 13% reported having ever been diagnosed with an STD, compared to 6% of other males; and
  - 25% reported having sexual intercourse before age 13, compared to 13% of other males.

Note: The statistics above should be interpreted with caution due to the small sample sizes (see detailed data tables for sample size by question).

**Syphilis Incidence:** Recent outbreaks of syphilis among MSM in Massachusetts are a potential indicator of unprotected sex and elevated risk for HIV infection.

- The number of reported cases of infectious syphilis reported in MSM increased over four-fold during the seven-year period from 2000 (N=33) to 2006 (N=156).
- The proportion of MSM among reported infectious syphilis cases increased from 23% in 2000 to 71% in 2006.

- From 2001 to 2006, the proportion of reported infectious syphilis cases among MSM who were also living with HIV infection increased from 12% to 47%.

### **HIV-Related Morbidity and Mortality among Men Who Have Sex with Men:**

#### ***AIDS Diagnoses over Time***

- The proportion of MSM among reported AIDS diagnoses (including those who injected drugs) declined from 31% in 1997 to 25% in 2000. From 2001 to 2006, the proportion of men who have sex with men increased from 28% to 36% of people diagnosed and reported with AIDS.

#### ***Mortality with HIV/AIDS***

- From 1999 to 2006, the proportion of deaths among MSM (including those who injected drugs) ranged from 20% to 26% of people reported to have died with HIV/AIDS.

#### ***Data Sources:***

HIV/AIDS Case Data: Massachusetts Department of Public Health (MDPH) HIV/AIDS Surveillance Program; data as of January 1, 2008

Behavioral Risk Factor Surveillance Survey Data: MDPH Bureau of Health Statistics, Research and Evaluation, Behavioral Risk Factor Surveillance System

Youth Risk Behavior Survey Data: Massachusetts Department of Education, Youth Risk Behavior Survey

Syphilis Data: MDPH Division of Sexually Transmitted Disease Prevention

HIV Counseling and Testing Data: MDPH HIV/AIDS Bureau, Office of Research and Evaluation

### ***Additional References of Interest:***

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Centers for Disease Control and Prevention. High-Risk Sexual Behavior by HIV-Positive Men Who Have Sex with Men —16 Sites, United States, 2000–2002. *MMWR*. 2004;53:891–894

Colfax G, Vittinghoff E, Husnik MJ, McKirnan D, Buchbinder S, Koblin B, Celum C, Chesney M, Huang Y, Mayer K, Bozeman S, Judson FN, Bryant KJ, Coates TJ; EXPLORE Study Team. Substance use and sexual risk: a participant- and episode-level analysis among a cohort of men who have sex with men. *Am J Epidemiol*. 2004 May 15;159(10):1002–12

Semple, SJ, Patterson TL, Grant I. Binge Use of Methamphetamine Among HIV-Positive Men Who Have Sex with Men: Pilot Data and HIV Prevention Implications. *AIDS Education and Prevention*. 2003;15: 133–147.

*For more detailed information and a description of data limitations, please see “HIV/AIDS in Massachusetts: An Epidemiologic Profile,” available online at [www.mass.gov/dph/aids](http://www.mass.gov/dph/aids)*